

Work Order ID 147608 /

147608

Page 1

Wednesday, June 08, 2016 2:29:57 PM

Item ID: D2573

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Saddle, Aft, Out

Start Date: 5/27/2016 Start Qty: 4.00

Cust Item ID:

Required Date: 6/8/2016 Req'd Qty: 4.00

Customer:

Reference:

Approvals: Process Plan: MJS Date: JUN 13 2016

Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2573	F								

100

0.02

100

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.24

HAAS CNC vertical machine #1

Program Batch No. 147608

Double check by: F.K.

1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets

2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets

3-Machine Step No 3 per Folio FA051 and insp

DAS
08
9-89

8

φ

DAS
20
9-89 16-07-25

110

0.00

110

CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.06

Conventional Milling Machine

Machine keyway as per dwg D2573 & D2574

DAS
08
9-89

8

φ

DAS
20
9-89 16-07-25

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

147608

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N900040100

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Stop *NS2*

Start Date: 5/27/2016 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 6/8/2016 **Req'd Qty:** 4.00 ***/****

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.01

Quality Control

B. 16/07/26

DAS
08
9-89

8

6

DAS
20
9-89

116-0725

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.01

Quality Control

A

DAS
33
9-89

33
489 16/07/28

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.03

Hand Finishing

68

2016/07 ^{DAS} 29 ³⁴ 9-89

BE B

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Work Order ID 147608

Wednesday, June 08, 2016 2:29:57 PM

147608

Page 3

Item ID: D2573 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle, Aft, Out
 Start Date: 5/27/2016 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 6/8/2016 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum M134788 Memo START TIME: 1:30pm OVEN TEMPERATURE: 326°F FINISH TIME: 2:00pm	0.00 0.01				8	0	11	16/08/22
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.01				8			DAS 38 9-89 AUG 24 2016
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: S1398 Memo	0.00 0.01			DAS 6 9-89	Count 8	PC		AUG 24 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
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Root Cause		FAULT CATEGORY									
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
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Misidentified	☐	Past Due	☐								

Work Order ID 147608

Wednesday, June 08, 2016 2:29:58 PM

147608

Page 4

Item ID: D2573

Accept

N900040100Setup Start ***NS1***

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Stop ***NS2***

Item Name: Saddle, Aft, Out

Start Date: 5/27/2016 Start Qty: 4.00 ***4***

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Required Date: 6/8/2016 Req'd Qty: 4.00 ***4***

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00					DAS		
180							21		
QC	Memo	0.07					2-00		AUG 25 2016
Quality Control									

MF
16-8-24

DQA: _____ Date: _____

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OTHER : _____																									

Picklist Print

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Page 1
7

Work Order ID: 147608

147608

Parent Item: D2573

D2573

Parent Item Name: Saddle, Aft, Out

Start Date: 5/27/2016

Required Date: 6/8/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: I As Per RevE 06-01-27 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-007		Manufactured	No			100	Each	31.0000	1	8			DAS
D6101-007									**	8			20
Saddle Billet													9-89 16-07-25
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				MAT041		31							
				143818		11							
				144497		20							
				147810					8				

DQA: _____ Date: _____

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				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER: _____					

DART AEROSPACE LTD	Work Order:	147608
Description: Saddle, Aft Outboard	Part Number:	D2573
Inspection Dwg: D2573 Rev. F		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.008	8.000	8.000	8.000		
F	0.490	0.510		.504	0.500	0.505	0.503		
G	0.257	0.262		.259	.259	.259	.259		
H	0.375	0.380		.377	.377	.377	.377		
I	0.490	0.510		.4985	.499	.500	0.502		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.5625	.5645	.5645	0.569		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.135	.135	.135	.135		
Q	0.115	0.135		.122	.124	.124	.123		
R	0.240	0.260		.248	.249	.249	.248		
S	0.115	0.135		.128	.130	.130	0.125		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		.237	.236	.239	0.242		
W	0.115	0.135		.129	.129	.127	0.127		
X	0.308	0.313		.312	0.312	0.312	0.312		
Y	0.760	0.765		.760	.760	.760	.760		
Z	0.352	0.372		.365	0.366	0.366	0.366		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.624	0.625	0.625	0.625		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.250	.250	.249	0.249		
AE	1.500	1.520		1.510	1.512	1.512	1.510		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.260	.260	.260	.260		
AH	0.240	0.260		.246	.252	.247	0.249		
AI	2.000	2.020		2.000	2.0013	2.001	2.000		
AJ	0.023	0.043		.035	.033	.033	.033		
Accept/Reject				DAS					

Measured by: 20 9-89	Audited by: 33 9-89
Date: 16-07-25	Date: 16/07/21

Rev	Date	Change	Revised by	Approved
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	

DART AEROSPACE LTD	Work Order:	147608
Description: Saddle, Aft Outboard	Part Number:	D2573
Inspection Dwg: D2573 Rev. F		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	5X	6X	7X	8X		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		0.502	0.500	0.500	0.500		
G	0.257	0.262		.259	.259	.259	.259		
H	0.375	0.380		.377	.377	.377	.377		
I	0.490	0.510		0.502	0.502	0.502	0.502		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.569	0.569	0.569	0.569		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.135	.135	.135	.135		
Q	0.115	0.135		.124	0.124	0.124	0.124		
R	0.240	0.260		.249	0.248	0.249	0.248		
S	0.115	0.135		0.127	0.127	0.127	0.127		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		0.241	0.241	0.241	0.241		
W	0.115	0.135		0.125	0.125	0.125	0.125		
X	0.308	0.313		0.312	0.312	0.312	0.312		
Y	0.760	0.765		.760	.760	.760	.760		
Z	0.352	0.372		0.366	0.366	0.366	0.366		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		0.625	0.625	0.625	0.625		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		0.249	0.249	0.249	0.249		
AE	1.500	1.520		1.510	1.510	1.510	1.510		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.249	0.248	0.248	0.249		
AI	2.000	2.020		2.000	2.000	2.000	2.000		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject				DAS					

Measured by:	20
Date:	16-07-25

Audited by:	33
Date:	11/07/29

Rev	Date	Change	Revised by	Approved
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	

